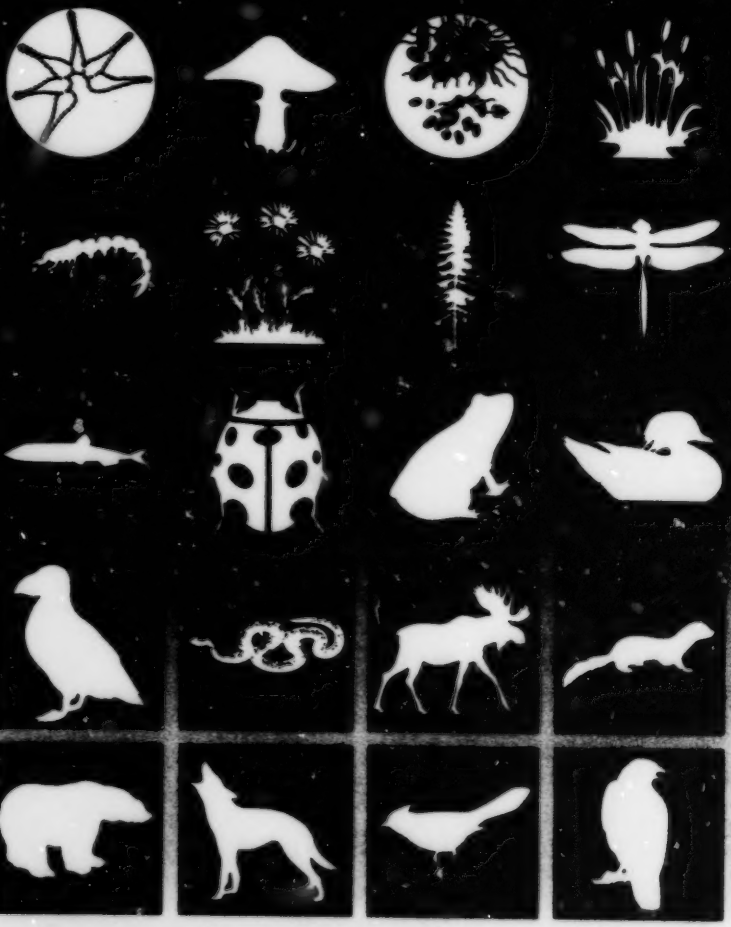
A Wildlife Policy for Canada



COVER ILLUSTRATION

The 20 wild organisms on the cover illustrate the range of species included in the *Wildlife Policy for Canada*: not just the birds and mammals traditionally thought of as wildlife, but also algae, bacteria, plants, fungi, invertebrates, fishes, reptiles, and amphibians. The matrix in which the species are arranged reflects the holistic approach of the policy, with its emphasis on ecosystems and biodiversity. Each column represents a different Canadian ecosystem (see below), and each row represents a different level of the food chain within that ecosystem. While the matrix shows only a few of the links in the food chain of any ecosystem, it gives an idea of the importance and interdependency of each part for sustaining the whole. Protecting this rich diversity of species is the goal of the wildlife policy.

ECOSYSTEM

FOOD CHAIN ▼	*Marine*	*Grassland/ Tundra*	*Forest*	*Freshwater*
	Alga	**Mushroom**	**Nitrogen-fixing Bacteria**	**Cattail**
	Krill (Plankton)	**Ox-eye Daisy**	**White Spruce**	**Dragonfly**
	Capelin	**Ladybug**	**Tree Frog**	**Wood Duck**
	Atlantic/ Tufted Puffin	**Garter Snake**	**Moose**	**Mink**
	Polar Bear	**Wolf**	**Blue/Steller's Jay**	**Golden/Bald Eagle**

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A WILDLIFE POLICY FOR CANADA

Wildlife Ministers'
Council of Canada

Adopted by the Wildlife Ministers' Council
of Canada at its meeting
on September 26–27, 1990

1990

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PREFACE

A Wildlife Policy for Canada is a national policy, providing a framework for federal, provincial, territorial, and nongovernmental policies and programs that affect wildlife.

The policy builds on *Guidelines for Wildlife Policy in Canada*, which were formally approved at the Wildlife Ministers' Conference of September 1982.

The guidelines were to be evaluated and reviewed after five years. This was done at the 1988 Federal–Provincial/Territorial Wildlife Conference, which involved wide public participation, and produced many recommendations for revision. These recommendations were used by a task force[1] in drafting *A Wildlife Policy for Canada*.

Federal, provincial, and territorial governments, aboriginal organizations, wildlife professionals, nongovernmental organizations, and the general public have contributed to *A Wildlife Policy for Canada*. The document expresses the will of Canadians to conserve wildlife for its own sake and for the benefit of present and future generations of Canadians.

[1]Task force members: Robert Andrews, Tom Beck, Gary Blundell, Jean Cinq-Mars, Paul Gray, Paul Griss, Stephen Hazell, Anthony Keith (chair), David Neave, Robert Prescott-Allen, and Arthur Smith.

INTRODUCTION

Wildlife is an integral and vital component of Canada's heritage. Canada is one of the few places in the world that still contains large natural ecosystems. Canada fronts on three of the world's five oceans, and has in its lakes and rivers more fresh water than any other nation. The wildness of Canada contributes greatly both to our high quality of life and to the functioning of the global ecosystem.

Much of the wildlife we enjoy today is attributable to earlier wildlife policies. Many depleted wildlife populations have been restored and habitats protected. New initiatives are underway, such as the North American Waterfowl Management Plan and the Wildlife Ministers' Council of Canada.

But the future of Canada's wildlife cannot be taken for granted. Wild populations and ecosystems are increasingly vulnerable to growing human numbers, escalating development, and expanding and changing demands for wild resources. Long-term changes to ecosystems, brought about by phenomena such as global warming and the long-range transport of air pollutants, threaten both wildlife and people. Such pressures challenge certain traditional approaches to wildlife management. They call for recognition of the need to limit human demands on ecosystems to a level that is within their carrying capacity, and for dynamic and improved wildlife management strategies, pursued in the context of an ecosystems approach.

Recently, public concern for wildlife has expanded to embrace the variety of life in all its forms. And the World Commission on Environment and Development has made it clear that conserving ecosystems and the diversity of their species is a prerequisite for sustainable development. Thus, wildlife in this policy refers to all wild organisms and their habitats—including wild plants, invertebrates, and microorganisms, as well as fishes, amphibians, reptiles, and the birds and mammals traditionally regarded as wildlife.

This broader perspective provides for guidance on the many species of wild organisms not covered by existing policies and supports an ecosystem approach to conservation. Wild species are managed by a number of agencies, including those responsible for terrestrial animals, fishes, marine mammals, and trees. These resource sectors

have their own legislation and policies. The *Wildlife Policy for Canada* is intended to complement them, so that there may be a comprehensive set of policies guiding the management of Canada's flora and fauna. Thus, agencies and organizations responsible for freshwater, marine, or terrestrial resources are expected to extend their concern to conserving the biodiversity of the ecosystems involved.

This national policy is not intended to alter the division of roles and responsibilities between federal and provincial or territorial governments.

Implementation of *A Wildlife Policy for Canada* requires the leadership of federal, provincial, and territorial governments, and the effective participation of aboriginal groups, nongovernmental organizations (including corporations and educational institutions), and the general public. This partnership, deploying the skills and resources of all participants, will help to secure wildlife, optimize its benefits, and enhance the quality of life for all Canadians.

GOAL

The goal of this policy is to maintain and enhance the health and diversity of Canada's wildlife, for its own sake and for the benefit of present and future generations of Canadians. This requires:[2]

1. Maintaining and restoring ecological processes. Ecological processes sustain the productivity, adaptability, and capacity for renewal of lands, waters, air, and all life on earth. They include maintenance of the chemical balance of the planet, stabilizing climate, recycling of nutrients, breakdown of pollutants and cleansing of air and waters, watershed protection, soil formation, and the supply of food and habitat for all species.

2. Maintaining and restoring biodiversity. Biodiversity means the variety of life in all its forms: ecosystems (such as boreal forests, short-grass prairies, freshwater wetlands, and coastal estuaries), species, and genetic variability within species. Maintenance of all these levels of diversity is necessary for environmental health.

3. Ensuring that all uses of wildlife are sustainable. Uses of wildlife should maintain the health and capacity for renewal of the populations and ecosystems concerned.

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[2] The three requirements follow the formulation of the *World Conservation Strategy* (1980: International Union for Conservation of Nature and Natural Resources, United Nations Environment Programme, and World Wide Fund for Nature [formerly World Wildlife Fund]).

GUIDING PRINCIPLES

These principles derive from the Canadian experience in wildlife conservation and guide the statements of policy that follow. They are not listed in order of priority.

- Wildlife is an integral part of the environment in which Canadians live and a key indicator of the health of that environment.
- Wildlife has intrinsic, social, cultural, and economic values.
- Wildlife is a major source of food and a vital part of the cultures and economies of many aboriginal peoples.
- All Canadians have stewardship responsibility for wildlife. Governments are accountable for its management. Aboriginal peoples have a special role in wildlife management and in certain regions are also accountable for it.
- The maintenance of viable natural populations of wildlife always takes precedence over their use by people.
- The way in which land, water, and air are used strongly affects the quality and quantity of habitat upon which wildlife depends.
- All Canadians share the costs of conserving wildlife. Those whose actions result in additional costs should bear them.
- Basic and applied scientific research are essential to our understanding of ecosystems and their wildlife components.
- Effective conservation of wildlife relies upon a well-informed and involved public.

EXPANDING THE SCOPE OF WILDLIFE POLICY

1. WILDLIFE AND BIODIVERSITY

Canada has approved the World Charter for Nature, which affirms that every form of life warrants respect regardless of its worth to people and that "The genetic viability on the earth shall not be compromised; the population levels of all life forms, wild and domesticated, must be at least sufficient for their survival, and to this end necessary habitats shall be safeguarded."

Canadians are increasingly concerned with biodiversity — the variety of different ecosystems, species, and genetic stocks — and not just the birds and land mammals that traditionally have been termed "wildlife." This implies an expansion of wildlife policy along three main lines.

First, in order to give governments a clear mandate to take conservation actions on any wild species or ecosystem, wildlife should mean all wild life: wild mammals, birds, reptiles, amphibians, fishes, invertebrates, plants, fungi, algae, bacteria, and other wild organisms.

Second, specific provision should be made for conservation of biodiversity by ensuring that: (a) resource policies and legislation cover conservation of all wild species, within-species genetic diversity, and ecosystem diversity; and (b) decisions that have an impact on the environment consider the effects on biodiversity.

Third, management of wildlife must include conservation of habitat. Wildlife and its habitat are inseparable. Loss or degradation of habitat means loss of wildlife, and the future of wildlife cannot be guaranteed unless the future of habitat is also ensured.

1.1 Governments should broaden their definition of wildlife to include any species of wild organism.

1.2 Governments should provide specifically for conservation of biodiversity in policies and legislation on resources and the environment.

1.3 Governments should ensure that the concept of wildlife in all policies and legislation includes wildlife habitat.

PROVIDING FOR WILDLIFE IN ECONOMIC AND ENVIRONMENTAL POLICIES

2. WILDLIFE IN POLICY AND PLANNING

Responsibility for land vertebrates, fish and marine mammals, commercially exploited trees, and protected areas is often assigned to different agencies, and few agencies presently recognize responsibility for the majority of invertebrates and plants.

At the same time, most sectors and agencies have an impact on, and benefit from, wildlife and its habitats—yet are seldom required to provide for their conservation. The sectors include energy, mining, industry, defence, housing, transport, urban development, water, agriculture, forestry, fisheries, recreation, and tourism.

In policy making and development planning (including both urban and resource development, and projects of the sectors listed above), considering economic, social, and environmental factors together enables wildlife conservation to be incorporated in policies, plans, and projects from the start.

Policy making

2.1 Governments should review, strengthen, and adopt comprehensive, cross-sectoral conservation policies and strategies in consultation with the public. Governmental policies and legislation on resources and the environment (such as on water, air, minerals, forests, and wetlands) and strategies for sustainable development should provide for conservation of wildlife and its habitats, and should ensure that all uses of resources are sustainable.

2.2 Corporations and all resource users should adopt policies and strategies for sustainability, including conservation of wildlife and its habitats.

2.3 The objectives and mandates of all sectors and agencies should require them to coordinate and consult with the agencies or organizations responsible for wildlife on decisions with a potential

impact on wildlife populations or habitats. In turn, the agencies or organizations responsible for wildlife should consult with the public.

2.4 The objectives and mandates of agencies responsible for renewable resources and ecosystems (notably forestry, fisheries, agriculture, water, and wildlife as traditionally understood) should require them to conserve the biodiversity of the resources and ecosystems concerned.

2.5 Wildlife agencies and organizations should consult with the responsible agencies concerning any impacts their management policies may have on other resources, such as archaeological resources.

2.6 Permanent mechanisms for interagency consultation should be established to provide for effective cross-sectoral definition of policies and management of programs for conservation of air, soil, water, and wildlife. A central unit may be needed for this purpose.

2.7 All governments should prepare and publish "state of the environment" reports.

Economic and development planning and assessment

2.8 Development projects should include an assessment of potential effects on wildlife populations and habitats as part of the environmental assessment process. Assessments of the environmental effects of development projects should be carried out at the project's pre-feasibility and feasibility stages and throughout the development planning process.

2.9 Development projects should also include a plan to: (a) protect ecological processes and the ecosystems that sustain them; (b) maintain wildlife populations, their habitats, and sensitive sites likely to be affected by the project; (c) consider the needs of wildlife users affected by the project; and (d) compensate for habitat that is unavoidably destroyed. The interest groups affected by the project should be involved in the preparation of the plans.

2.10 Existing monetary and fiscal policies—including tax, revenue, and government expenditure policies—should be examined for their impacts on wildlife conservation. New technologies, policies, and laws—especially major macroeconomic, finance, and sectoral policies and laws that are likely to result in significant impacts on the environment — should also be assessed for their impacts on wildlife and biodiversity. Based on this analysis, governments should eliminate measures that favour overexploitation of biological resources or destruction of habitats.

2.11 Regional assessments are needed where a number of development activities with potentially cumulative impacts are planned for a particular area. Sectoral assessments are needed to review the impacts of sectoral policies and investments.

2.12 Approval and any public financial support should be provided only to those policies or projects that, on the basis of assessment, are found to have an acceptable impact on wildlife populations and habitats.

3. EVALUATING AND INCREASING THE SUSTAINABLE BENEFITS FROM WILDLIFE

Wildlife and wild resources make major economic contributions, but their conservation is grossly underfunded. Better information on all values of wildlife is required to improve understanding of the diversity of wildlife values and beneficiaries, show the importance of biodiversity to development, assist in decisions on competing uses of wildlife and ecosystems, and justify expenditures on conserving wildlife and ecosystems.

A bigger investment is needed in maintaining wildlife and ecosystems. At the same time, the sustainable benefits from wildlife can be increased. This would also strengthen public support for wildlife conservation and make it easier for governments to incorporate it as a high priority of economic and development policy.

3.1 Governments and nongovernmental organizations should determine regularly the values of wildlife. Improved methods of using the economic benefits of wildlife to support wildlife conservation should be developed.

3.2 To provide information suitable for "state of the environment" reporting and national accounts, governments should conduct a series of economic evaluations of the sustainable net product of the various resource sectors, grouped by ecosystem. These evaluations should aim to estimate (a) the value added (see Glossary) contributed by each sector and (b) the costs of any resource depletion, pollution, and habitat destruction, and then should subtract (b) from (a).

3.3 The private sector and wildlife management agencies should aim to maintain and increase the sustainable benefits from wildlife. In particular, they should promote activities that stress appreciation of wildlife and its natural habitat and should explore ways of increasing the benefits from wildlife obtained by aboriginal and other rural communities.

3.4 Wildlife programs should be reviewed, developed, or modified to ensure that wildlife is enjoyed fairly by as many people as possible, consistent with the conservation of wildlife and ecosystems.

4. CANADA'S INTERNATIONAL RESPONSIBILITIES

Conservation of species that migrate between Canada and other countries depends on protection of their habitats by all countries concerned. In addition, Canada's wildlife is part of the heritage of all people, just as the wildlife of other countries is part of the heritage of Canadians. As such, our responsibility for wildlife in Canada is an international one, and we have an interest in wildlife conservation throughout the world.

4.1 With respect to species that Canada shares with other countries, Canada should participate in international programs to assess wildlife populations, conserve habitat, and negotiate and regulate use.

4.2 Canadian governments should assess the impacts of development projects in Canada on the wildlife of other countries, and the federal government should request other countries to assess the impacts of their development projects on wildlife in Canada.

4.3 Canada should support the establishment and enforcement of international conventions to conserve wildlife, and make a strong commitment to fulfilling its international obligations, ensuring that they support the interests of aboriginal and other users of wildlife.

4.4 Canada's wildlife community should support and participate in the exchange of technical assistance with other countries to conserve wildlife and ecosystems and to incorporate conservation principles in development planning and projects.

4.5 All Canadian development assistance—both bilateral and multilateral—should be directed to helping recipient countries achieve ecological and economic sustainability. A significant proportion of such assistance should be devoted to conservation and sustainable development of biodiversity and wildlife.

INVOLVEMENT OF ABORIGINAL PEOPLES IN WILDLIFE MANAGEMENT

5. INVOLVEMENT OF ABORIGINAL PEOPLES IN WILDLIFE MANAGEMENT

The Canadian constitution recognizes and affirms the existing aboriginal and treaty rights of aboriginal peoples. Some of these rights relate to wildlife. In Quebec, which has not signed the constitution, certain agreements have been made with aboriginal peoples, and others are being negotiated to achieve similar objectives.

Inuit, Indians, and Metis have a special interest in wildlife and in certain regions authority for its management. Aboriginal peoples have used wildlife sustainably for centuries and prossess unique and intimate knowledge of the wild resources on which they depend. Wildlife still provides food and raw materials to aboriginal groups. Land and wildlife play a central role in their cultural, economic, and spiritual systems, institutions, and practices, and they are therefore especially concerned with its conservation.

A new feature of wildlife management in Canada is the emergence of joint management by aboriginal people with federal, provincial, and territorial governments. This practice has been provided for in some jurisdictions through comprehensive land claim agreements and other means. The development by aboriginal peoples and governments of effective cooperation in wildlife management is essential to conservation throughout Canada.

Wherever appropriate, through comprehensive land claim agreements or other means:

5.1 Governments should undertake to establish cooperative wildlife management programs with aboriginal peoples for the purposes of wildlife conservation. This can be done without prejudice to land claim negotiations and aboriginal and treaty rights.

5.2 Governments should involve aboriginal peoples in planning and implementing coordinated wildlife research, management, and enforcement.

5.3 Governments and aboriginal peoples should work cooperatively to ensure that the special knowledge and understanding of wildlife that aboriginal people have is reflected in management and education programs.

5.4 Governments should encourage aboriginal people to assume leading roles as wildlife management professionals and enforcement officers through university, college, and on-the-job training programs.

IMPROVING WILDLIFE CONSERVATION

6. CONSERVATION OF WILDLIFE HABITAT

The extent and quality of wildlife habitat are declining in Canada. Lost or changing habitats, particularly in southern Canada, have reduced the abundance, diversity, and distribution of many wild species. Habitats may change or disappear at an accelerating rate as a result of climate change, adding to the pressures of unsustainable resource use, urbanization, and pollution.

Protection of habitats and ecosystems is the cheapest and most effective way of conserving wildlife and must always take precedence over other means. Moreover, restoring habitat is difficult, expensive, and often impractical.

Habitat conservation requires four mutually supportive approaches: comprehensive systems of protected areas, integration of habitat conservation in the management of public lands, habitat conservation on private lands, and habitat conservation on aboriginal lands. Applying the principle of public stewardship to wildlife that depends on privately owned habitat is a major challenge of wildlife management.

6.1 Governments, in cooperation with aboriginal peoples and nongovernmental organizations, should plan and implement comprehensive programs to maintain the diversity and distribution of wildlife habitats within major ecosystems in Canada. Program planning should classify and evaluate wildlife habitat, including the identification of critical habitats, and define wildlife habitat goals.

6.2 Governments, in cooperation with aboriginal peoples and nongovernmental organizations, should monitor and assess ecosystems and their wild populations in a form and to a schedule compatible with "state of the environment" reporting. This should include:

- Assessing the capability of habitats to support wildlife
- Assessing the effects on habitats of changing land use, pollution, introduced species, and other disturbances
- Assessing the extent and quality of habitat to determine gains and losses
- Monitoring habitat conservation measures

6.3 Governments and other organizations should provide financial and other incentives and remove disincentives, to mitigate impacts and encourage activities that enhance wildlife habitats. Costs of mitigative measures to protect wildlife habitat should be met by those whose actions require mitigation. Costs of rehabilitation of degraded habitat should be met by those causing the degradation.

6.4 The discharge of pollutants that threaten ecosystems or the accumulation of unacceptable levels of pollutants in wildlife should be prevented. Where such contamination presents a significant risk to consumers, access to the resource must be closed or the consumers must be advised of the risks.

6.5 All laws that protect habitat will be strictly enforced, and, where necessary, new legislation with adequate penalties will be passed to protect wildlife habitat.

6.6 Governments will complete and maintain comprehensive systems of protected areas, through legislation and/or policy, that include representative ecological types and give priority to the protection of endangered or limited habitats. To allow species to change their local and regional distributions in response to climate change and other factors, the protected area systems must be designed to:

- Protect the diversity of Canada's physical environments
- Contain a range of environments within each protected area
- Link protected areas by corridors of suitable habitat

6.7 Governments should include conservation of wildlife habitats as a management objective of all sectors using public lands and also provide for conservation of the full range of wildlife habitats in land use planning, setting regional goals for this purpose.

6.8 Landowners and land users should adopt a land ethic of sound conservation practices and stewardship of resources in managing their lands.

6.9 Governments should encourage conservation of wildlife habitats on private land by providing tax credits, reduced property taxes, subsidies, or other benefits for the establishment of nature reserves or other protected areas, or other measures to conserve habitats. They should ensure, by legislation if necessary, that conservation obligations undertaken in return for such benefits can survive changes in ownership of the land. They should explore the potential for entering into private management agreements with landowners who are not prepared to dedicate land as nature reserves. Governments and landowners should also develop cooperative programs to conserve wildlife populations and habitats.

6.10 Aboriginal peoples, governments, and nongovernmental organizations should promote the establishment of protected areas managed by aboriginal peoples where such areas correspond to traditional aboriginal lands.

7. CONSERVATION OF WILDLIFE POPULATIONS

Whereas extinctions are natural and inevitable, the impact of human activities on ecosystems has accelerated wildlife population declines and extinctions, resulting in a loss of genetic diversity. Genetic diversity — both within each species and in the number of different species — is crucial to the maintenance of viable ecosystems. Furthermore, within-species genetic diversity is essential for each species to adapt and survive and is the raw material of plant and animal breeding.

It is a matter of priority for all governments to work cooperatively with each other, aboriginal peoples, nongovernmental organizations, and the public to prevent species extinctions and to conserve as much within-species diversity as possible.

Special attention should be paid to key wildlife species: species that are particularly important ecologically (species that create and maintain habitats for other organisms), economically, culturally, or scientifically; indicator species; and species that are endemic or at risk of extinction.

Optimum wildlife populations

7.1 Wildlife should be managed to maintain a diversity of species broadly distributed throughout their range at levels of abundance sufficient to enable them to adapt to environmental changes and to meet management objectives. Local and regional population changes may also need to be addressed.

7.2 There should be a national program for monitoring the status of and trends in biodiversity. It should include compilations of flora and fauna and regular surveys to determine what species occur where and in what numbers, changes in these variables, and the causes of change.

7.3 The status of key wildlife species will be established by baseline surveys and monitored regularly. Regional targets for the abundance, diversity, and distribution of wildlife should be established in consultation with the public. The occurrence and effects of diseases and contaminants in wildlife populations will be monitored.

7.4 Uses of wildlife, including scientific research, should be managed to ensure they are sustainable and humane and in accordance with regional goals. Costs of special management measures required to facilitate intensive uses should be paid for by the users concerned.

Species and ecosystems at risk

7.5 Status reports should be prepared on all species and ecosystems of concern. Where necessary, protection and recovery plans for vulnerable, threatened, endangered, and extirpated species and ecosystems should be prepared and implemented.

7.6 Programs should be developed to conserve within-species genetic diversity of key species, paying special attention to threatened genetic variants and to the wild relatives of crops, livestock, and species used in aquaculture.

Regulation and enforcement

7.7 Legislation regulating uses of wildlife will be enacted and enforced to conserve wildlife populations and to ensure that all uses are sustainable and that uses of wild animals are humane. Penalties and enforcement will be regularly reviewed to ensure that they provide an effective deterrent to illegal use of wildlife.

7.8 Governments, aboriginal peoples, and nongovernmental organizations should undertake cooperative programs to inform the public of the rationale for conservation laws and regulations and to solicit the public's assistance in promoting awareness and compliance.

Conflicts between people and wild animals

7.9 Wherever possible, human activities should be managed to avoid or minimize conflicts with wild animals. Ecological analysis should be undertaken to this end (for example, silvicultural practices can be altered to avoid budworm outbreaks).

7.10 Wild animals that cause unacceptable risk to people; damage to crops, aquaculture, or livestock; or pressure on habitats or other wildlife populations should be controlled only on the basis of long-term, scientifically sound, and economically justified programs. Such programs should be developed in close consultation with public and private interests; should employ only the most safe, efficient, economical, and humane methods; and should be subject to

regulation. Lethal methods should be used minimally and only when preventive measures fail. In certain cases of crop damage, compensation may be paid. Integrated pest management should be used to control agricultural and silvicultural pests.

Wild animals in captivity

7.11 Where wild animals are kept in captivity, it must be in humane conditions and under government permits and monitored regularly. The permit and monitoring system should cover sale or trade of wild animals or their products.

7.12 Captive stocks must be maintained in such a manner that the potential for escape, transmission of disease, or transfer of genes poses negligible risk to wild populations, and so that conflicts with predators are minimized.

8. CONTROL OF INTRODUCED AND GENETICALLY ENGINEERED SPECIES

Many ecosystems have been severely damaged by the introduction of non-indigenous species of plants and animals. The long-term benefits rarely outweigh the damages of such introductions. Developments in biotechnology could result in the release or escape of organisms to the natural environment, adding to the need for effective controls.

8.1 Introductions of species from outside Canada, as well as from one jurisdiction to another within Canada, should be controlled. Introduction of a non-indigenous or genetically engineered species should be considered only if:

- No indigenous species is suitable for the purpose of the introduction.
- Clear and well-defined benefits to human or natural communities are foreseen.
- No known adverse environmental impact is foreseen, and some means of controlling the introduced population exists (such as predators or climate).

8.2 No non-indigenous or genetically engineered species should be introduced into a natural ecosystem. No non-indigenous species should be introduced into a modified ecosystem unless:

- There are exceptional reasons for doing so.
- The operation has been comprehensively assessed and carefully planned in advance.
- Provision is made for monitoring any effects.

8.3 Non-indigenous species may be introduced into cultivated and built ecosystems, provided that an assessment is made of the potential impacts on nearby modified and natural ecosystems and that there is an effective plan to prevent or at least minimize negative impacts.

8.4 Governments should make every effort to prevent accidental introductions of non-indigenous species.

9. AN IMPROVED BASIS FOR WILDLIFE CONSERVATION

Effective conservation depends on scientific and traditional information on the species involved, their populations and habitats and ecological relationships, and on uses of wildlife. It also requires cooperation and exchange of information and perspectives among all interested groups, and competent professionals to apply the information.

Only half of Canada's estimated 150 000 species have been described or recorded. Plants, invertebrates, and microorganisms are especially neglected, although they play vital roles in ecological processes. Baseline studies on the taxonomy, distribution, and ecology of Canada's species are essential.

Research

Research is essential to wildlife conservation. But wildlife research programs in Canada have been seriously reduced over the past decade. They are not capable of meeting the present requirements of

wildlife management authorities, let alone the new challenges of climate change, dwindling habitat, and expanding and diversifying demands for wildlife.

9.1 Governments should commit themselves to rebuilding wildlife research programs and to increasing the scale and scope of research on wildlife and ecosystems. Research programs should be developed in cooperation with nongovernmental organizations, universities, museums, zoos, and botanical gardens.

9.2 Governments should establish a national system of cooperative wildlife research centres.

9.3 Research to provide the information needed to combine social and economic development with conservation of wildlife and wildlife habitat should also be given priority. Such research should also develop innovative ways to conserve habitats.

9.4 The knowledge of aboriginal peoples and other users of wildlife should be actively sought to complement scientific research. In areas where traditional aboriginal activities take place, aboriginal people should be favoured in training and employment in every phase of scientific work.

Professional development

9.5 Governments should provide enhanced training and professional development for wildlife management personnel.

9.6 Cooperative wildlife research centres should provide training in wildlife research and management.

9.7 Opportunities for the cross-training of wildlife managers in each other's disciplines should be developed and implemented, including training of resource managers in ecology and conservation biology.

9.8 Opportunities for wildlife managers to learn about aboriginal philosophies of wildlife and traditional aboriginal lifestyles should also be provided, and aboriginal people should be employed in wildlife management.

10. INVOLVING THE PUBLIC

Canada's wildlife is the heritage and responsibility of all Canadians. Therefore, wildlife conservation requires the effective involvement of all Canadians: governments, aboriginal peoples, nongovernmental organizations, and individuals.

The benefits and beneficiaries of wildlife and ecosystems are diversifying. This calls for wider understanding of the many ways in which biodiversity can be used sustainably. At the same time, Canada's increasingly urban population knows less about wildlife than did previous generations. There is a lack of a common understanding of wildlife based on traditional and scientific knowledge. Wildlife interest groups and educators must take a more active role in preparing Canadians, young and old, to become wise stewards of wildlife and to protect the interests of all beneficiaries.

Participation and education

10.1 Governments should develop effective and timely consultation processes to provide for the effective involvement of the public, nongovernmental organizations, and local communities in policy development, land use planning, and wildlife management.

10.2 Wildlife projects involving private citizens and nongovernmental organizations should be promoted and assisted.

10.3 Governments, aboriginal peoples, and the nongovernmental sector should provide effective education, information, and extension programs on wildlife and wildlife management and the diversity of beneficiaries.

Public access to wildlife

As Canada's population becomes more urbanized, demand for access to wildlife near urban centres is increasing. Most of this land is privately owned.

10.4 Means of access to wildlife close to centres of human population should be developed by wildlife management authorities in cooperation with municipalities, nongovernmental organizations, aboriginal people, and landowners.

10.5 Reasonable public access to wildlife on private land should be promoted and facilitated, while protecting the rights and interests of landowners; and access to wildlife on public land encouraged, while protecting the rights and interests of lessees and aboriginal peoples.

IMPLEMENTATION

Adoption of this policy includes a commitment to implement it. The federal, provincial, and territorial wildlife ministers will prepare implementation plans, and they will review implementation progress at the annual meetings of the Wildlife Ministers' Council of Canada. They will have the policy reviewed in five years. The Council will appoint an independent auditor to audit implementation of the policy prior to the five-year review.

GLOSSARY

Biodiversity: biotic or biological diversity; the variety of different species, the genetic variability of each species, and the variety of different ecosystems they form.

Captivity: the state of being held in zoos, safari parks, aquaria, rehabilitation centres, game ranches, wildlife parks, laboratories, etc.

Conservation: "the management of human use of the biosphere so that it may yield the greatest sustainable benefit to present generations while maintaining its potential to meet the needs and aspirations of future generations."[3] Conservation includes preservation, maintenance, sustainable use, restoration, and enhancement of populations and habitats.

Introduction: the intentional or accidental dispersal by human agency of a living organism outside its historically known native range.

Management: the exercise of responsibility for wildlife, including protection, intervention, and non-intervention.

Nongovernmental organization: any organization that is not a part of federal, provincial, territorial, aboriginal, or municipal government. Includes private voluntary organizations, corporations, educational institutions, and labour unions.

Sustainability: a characteristic of a process or state that can be maintained indefinitely.

Sustainable use: use of an organism or ecosystem at a rate within its capacity for renewal or regeneration.

Use: any activity involving wildlife that benefits people. The activities range from those having a direct impact on the organisms and ecosystems concerned (such as logging, hunting, or fishing) to those having no impact (such as appreciation).

Value added: the value of goods and services less the cost of the inputs, such as raw materials and energy, used in their production.

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[3] Definition from the *World Conservation Strategy*, section 1.4.